

California Monthly Climate Summary October 2007

Weather Highlights

October 2007 was a tale of extremes. The beginning of the month included cold, wet weather and the end of the month included hot, dry weather and some fierce Santa Ana winds. According to the Western Region Climate Center's [California Climate Tracker](#), all of this averaged out to a month that was 2.4°F lower than the long-term average temperature of 59.8°F. This is the 4th October in a row with a monthly average temperature below the long-term mean. With a statewide average of 1.40 inches, precipitation for October was 124.5% of the long term average. The previous 2 Octobers had recorded below average precipitation for the month.

October weather started cool and finished warm. The first week of the month saw a trough pass over the northern part of the state and triggering the first rains of the new water year. Temperatures were running up to 10 degrees below average for this time of year. The second week of the month started with a ridge in place bringing warm and dry conditions across the state. Southern California experienced offshore flow resulting in low humidities and high temperatures prompting red flag warnings. A series of fronts pushed into the state bringing more rain and some snow to northern California. The first system moved over southern California lowering temperatures but did not produce significant rainfall. A second front later in the week did cause some rain for southern California. The week ended with another ridge building into the state. The third week saw more systems pass over California bringing more rain and gusty winds. By the end of the week, conditions set up for a strong Santa Ana wind outbreak across southern California. Several areas recorded wind speeds above 70 mph. A series of wildfires erupted across southern California causing widespread damage and smoke that could be seen from satellites. A table of some of the peak wind gusts recorded is shown below. The data was provided by the Oxnard Weather Forecast Office. The month finished with one more storm system passing over California with light rain hitting the central coast before more high pressure and dry conditions returned.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 63 temperature records tied or broken and 11 precipitation records tied or broken for the month. On October 5th, Bakersfield broke a daily low maximum temperature record set in 1916 by only getting to 66°F. The previous record was 68°F. Red Bluff tied a 1937 record with a daily minimum temperature of 44°F. On the 6th cooler weather created new daily minimum temperature records across the state. Eureka tied a 1915 record of 40°F. Paso Robles set a new record at 34°F breaking the 1969 mark of 35°F. Sandberg tied their 1967 mark of 36°F. Later in the month, southern California set several new high temperature records. Santa Ana set a new daily maximum temperature record on the 23rd with a reading of 99°F breaking the old record of 98°F set in 1965. Fullerton and Costa Mesa also reached 99°F and set new record highs for the day. New record high minimums were set on the 23rd as well. Santa Ana only fell to 78°F breaking the old high minimum of 69°F set in 1992. Yorba Linda and Newport Beach also stayed above 70°F for the day with readings of 76°F and 74°F respectively. Hot records continued on the 24th with the San Diego Wild Animal Park reaching 101°F breaking the old record of 99°F set in 1990. Brown Field reached 94°F which broke the old record by 7 degrees set in 1945.

Yorba Linda set a high minimum temperature record for the second straight day with a reading of 68°F beating the old record set in 1965 by six degrees.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 5 recorded a maximum temperature above 100°F. For minimum temperatures, 154 stations recorded a minimum temperature below freezing. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the monthly average extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC and CIMIS networks is also shown.

Precipitation in October was above normal marking a good start to the water year. The largest amount of precipitation recorded in the CDEC precipitation gages for October 2007 was at the Klamath River at Orleans on the north coast with a total of 8.53 inches. For the CIMIS network, Black Point in Marin County topped the precipitation charts with 3.56 inches for the month. Eureka California broke a daily precipitation record with 1.99 inches of rain on the 20th of October. The previous daily record total of 1.88 inches was set in 1899. On the 14th of October Bob Hope Airport and Santa Barbara Airport broke records for daily precipitation set in 1941 with totals of 0.31 inches and 0.28 inches respectively. On the 15th Woodland Hills recorded 0.01 inches for the day which was the first time precipitation was recorded at that location on that day. Twenty-four stations in the CDEC and CIMIS databases reported zero precipitation for the month. The 8-Station Index for northern California precipitation recorded 3.5 inches of precipitation. On average, October would have 3.0 inches of precipitation recorded for the 8-station index. Statewide, the average precipitation for October was 125% of the long-term average based on the California Data Exchange Center (CDEC) gages. Precipitation percentages by region from the CDEC gages are shown in a table at the end of this document.

The Drought Monitor maps which can be found on the National Drought Mitigation Center's (NDMC) website <http://drought.unl.edu/dm/> have shown some improvement for the northern part of California during the month of October due to the above normal precipitation. These maps are largely a reflection of precipitation and soil moisture deficit estimates. Moderate drought conditions (D1) are shown for the North Lahontan, Sacramento and lower San Joaquin Valleys. The Central Coast and Sierra Nevada regions south of Lake Tahoe are depicted as severe drought (D2). The southern parts of the state are depicted by the NDMC as being in extreme drought (D3). Maps are updated weekly.

The latest U.S. Seasonal Drought Outlook from NOAA depicts conditions for the next three months. For California, the map shows improving conditions for the northern part of the state and persistence of drought conditions in the south. Updates are provided twice per month. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html

It's a new water year. Last year was a dry one with the Sacramento water year index being classified as dry and the San Joaquin as critical. Water supply information for California can be found at http://cdec.water.ca.gov/water_supply.html. A historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cqi-progs/iodir/WSIHIST>.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is being classified as a moderate La Niña pattern with conditions intensifying or persisting over the next couple of months. Equatorial sea surface temperature anomalies for the eastern tropical Pacific are running between -0.9° C and -2.2° C. Both statistical and dynamical models forecast La Niña conditions lasting into the first part of 2008. More information on the topic can be found at the Climate Prediction Center's web site:

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/. Updates are posted weekly. Current climate indicators including ENSO conditions indicate a warmer than average November through January period for most of California. Precipitation forecasts show above normal totals for the next three months for the northern half of the state and equal chance of above, near, or below normal precipitation for the rest of the state except the southern third of the state which shows a higher probability of below normal conditions. Long-range outlook plots of precipitation and temperature can be found at: <http://www.wrcc.dri.edu/longrang/>. General weather information of interest can be found at <http://www.noaa.gov/>. For anomaly information please see http://www.wrcc.dri.edu/anom/cal_anom.html.

Agricultural Data

October continued the harvest for many crops including safflower, rice, sugar beets, corn silage, beans, grains, and alfalfa. Wine and juice grape harvests continued at a slower rate. Vegetable crops were harvested across the state. Navel orange harvest began in Tulare County. The cooler temperatures were causing fruit split in the pomegranate crop. Good yields are occurring in the almond harvest and pistachio and walnut harvests continue. A second harvest of pistachios is expected in some areas. The wildfires in southern California caused damage to the avocado crop and many acres of rangeland were burned. San Diego County reported damage to nurseries from the fires as well. Cooler weather was positive for fall calving and milk production. Beef cows in foothill pastures are receiving supplemental feed and nutrients as the rains in October were not enough to improve pasture conditions. Stock sheep and goats were grazing in harvested fields. Beekeepers were moving their hives to foothill and mountain locations. For further crop information see <http://www.nass.usda.gov/index.asp>.

Other Climate Summaries

[California Climate Tracker](#) (new product of Western Region Climate Center)

[Golden Gate Weather Service Climate Summary](#)

[NOAA Monthly State of the Climate Report](#)

Statewide Extremes (CDEC)

High Temperature – 104° F (Arroyo Grande, Central Coast)

Low Temperature - -4° F (Casa Vieja Meadows, Tulare Basin)

High Precipitation – 8.53 inches (Klamath River at Orleans, North Coast)

Low Precipitation – 0 inches (6 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 90.6° F (UC San Luis, Imperial County)

Low Average Minimum Temperature – 27.1° F (Alturas, Modoc County)

High Precipitation – 3.56 inches (Black Point, Marin County)

Low Precipitation – 0 inches (18 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basins Reporting			Stations Reporting			Percent of Historic Average	
		Basins	Oct	Oct	Stations	Oct	Oct	Oct	Oct
NORTH COAST	0.27	5	4	4	19	13	13	171.5%	172%
SAN FRANCISCO BAY	0.03	2	2	2	6	5	5	141.8%	142%
CENTRAL COAST	0.06	3	3	3	11	6	6	84.7%	85%
SOUTH COAST	0.06	3	3	3	15	8	8	108.7%	109%
SACRAMENTO RIVER	0.26	5	5	5	43	29	29	157.4%	157%
SAN JOAQUIN RIVER	0.12	6	6	6	25	19	19	97.5%	98%
TULARE LAKE	0.07	5	5	5	28	17	17	83.2%	83%
NORTH LAHONTAN	0.04	3	3	3	14	9	9	97.1%	97%
SOUTH LAHONTAN	0.06	3	2	2	15	3	3	6.6%	7%
COLORADO RIVER	0.03	1	1	1	6	4	4	0.0%	0%
STATEWIDE WEIGHTED AVERAGE	1.00	36	34	34	182	113	113	124.9%	125%

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	35	32.4	50.6	76.5
SF Bay	19	44.0	57.8	77.2
Central Coast	35	42.9	58.7	80.7
South Coast	67	43.2	63.4	88.0
Sacramento	91	34.3	52.8	79.3
San Joaquin	78	34.5	54.1	78.9
Tulare Lake	21	23.1	49.0	77.0
North Lahontan	29	21.0	42.5	69.4
South Lahontan	23	28.5	51.6	75.1
Colorado River Desert	23	53.5	71.6	90.5
Statewide Weighted Average	421	34.1	53.3	87.6

Santa Ana Wind Peak Gusts Southern California (from NWS WFO Oxnard)

Location	County	Peak Gust Speed (mph)
Laguna Peak	Ventura	111
Whittier Peak	Los Angeles	108
Warm Springs	Los Angeles	91
Wiley Ridge	Ventura	87
Camp Nine	Los Angeles	86
Fremont Canyon	Orange	85
Palm Elementary School	San Bernardino	79
Newhall Pass	Santa Clarita/LA County	78
Descanso	San Diego	69
Malibu Hills	Los Angeles	64
Potrero	San Diego	60
Ontario Airport	San Bernardino	59